

Trainer's Guide

Module 6.2.3

Complex communication means



Presenter's name: _____

Date: _____

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1.Introduction

Vocabulary

The literature reports that IDD children acquire the same first words as neuro-typical children (Barrett & Diniz, 1989; Chapman, 2006; Mervis & Bertrand, 1995b) and apply the same strategies for acquiring new words (Chapman et al., 1990; Mervis & Bertrand, 1994, 1995a).

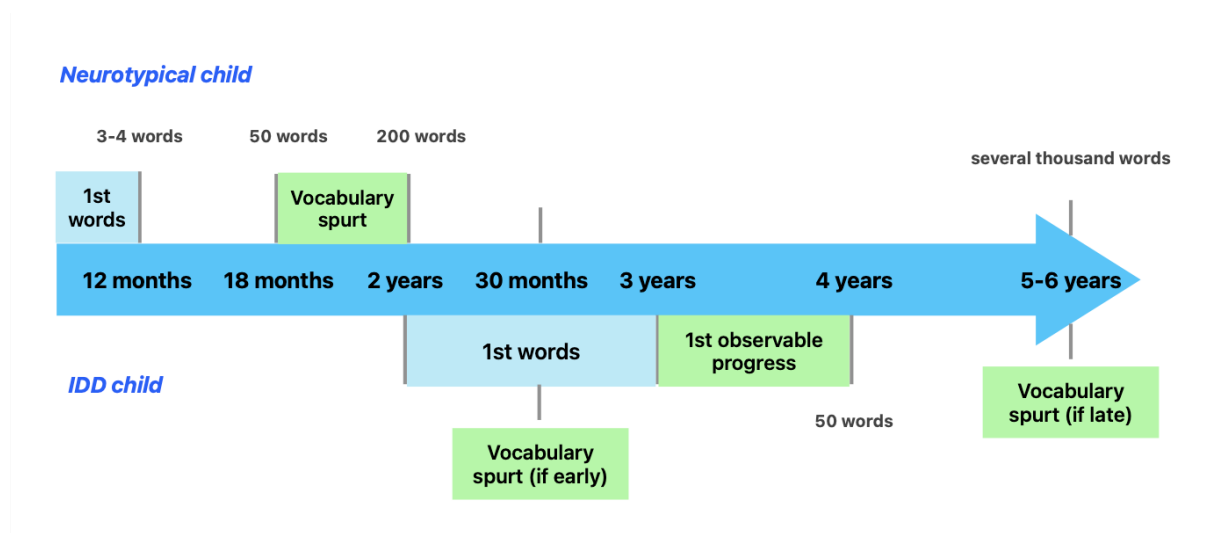
The most obvious process in vocabulary development is the increase in the number of words a child can produce. Numerous studies have looked at the number of words produced by neurotypical children at different ages. They show that young children acquire basic vocabulary very quickly. At 12 months, a child produces an average of 3 or 4 words, at 18 months 90 words, at 2 years 320 words and at 30 months 570 words (Fenson et al., 1994); exposure to isolated words may facilitate early lexical development. In general, the first words are acquired slowly, with an average of between one and three new words per week. When the child knows 20 to 40 words, at around 18-20 months, a vocabulary spurt takes place and the rate of acquisition of new words suddenly increases and accelerates, so that during this period the child learns 8 or more words per week (Bassano, 2000). By the age of 6, a child has produced around 14,000 words. From then on, 3,000 words are learnt every year until the age of around 17. As an adult, the productive lexicon is made up of 20,000 to 50,000 words (Clark, 1995).

Although the first words appear in neurotypical children and IDD children at approximately the same mental age, it is only later that the delay widens in the latter, leading us to consider their lexical development as a slowed and incomplete version of normal development (Chapman, 2006). For example, it seems that only 10% of children with Down's syndrome produce their first word at the age of one, with the majority only starting to speak after the age of 2, against a background of great inter-individual variability (Berglund et al., 2001). However, although delayed, the lexical development of children with Down's syndrome follows the same developmental trajectory as that of neurotypical children (Rondal & Comblain, 1999). In terms



of vocabulary comprehension, a certain number of adolescents can even show performance equal to or better than that of normo-typical children of the same mental age (Chapman, 2006).

The phenomenon of lexical explosion, which is a sign of vocabulary growth at around 18-24 months in normally developing children, is affected by intellectual disability and delayed in time. According to studies, it can be identified in children with Down's syndrome at around 30 months or later, at around 5 to 6 years (Oliver & Buckley, 1994). Vocabulary growth is therefore less marked than in the average child, and in more than 50% of cases, children with a moderate intellectual disability do not break the 50-word vocabulary barrier before the age of 4 (Berglund et al., 2001). It is therefore only from the age of 3 to 4 that real progress can be observed. In the light of these data, it appears that the speed of acquisition of new words in IDD children is not equal to that of children in normal development. The developmental curves of the two groups gradually separate and the gap widens over the years, in a context of great inter-individual variability. As a corollary, their lexical stock remains lower than that of their peers in normal development matched based on mental age or linguistic age (Zampini & D'Odorico, 2011) .



As shown in the figure above, it appears that the speed of acquisition of new words in IDD children is not equal to that of children in normal development.

More than chronological age, mental age is an essential explanatory variable in the development of the lexical stock of people with an intellectual disability (Barrett & Diniz, 1989; Roberts et al., 2007). In fact, the various studies conducted over the last few decades have

shown that there is no correlation between the size of the expressive vocabulary and the chronological age of IDD children, suggesting that there is no linear relationship between expressive vocabulary and life experience or simple biological maturation.

On the other hand, the size of receptive vocabulary is correlated with both mental age and chronological age, as shown by the work of Facon et al. (Facon et al., 2002; Facon, Nuchadee, et al., 2012; Facon et al., 2016). This suggests that the life experience of people with an intellectual disability, whatever the aetiology, increases opportunities to expand the receptive side of the lexical stock, even if active retrieval from memory for production purposes remains deficient.

In the early stages of lexical acquisition, the words used by IDD children are relatively similar to those used by neurotypical children. For example, the first 50 words produced by children with Down's syndrome and neurotypical children have the same referential content, i.e. names of people around them, animals, toys, kitchen utensils, food and drink, as well as words relating to daily routines and activities (Clark, 1995). Neurotypical and Down's syndrome children first acquire the names of objects that are "dynamically mobile or capable of movement" (people, animals, vehicles, etc.), then the names of objects that they can manipulate (toys, clothes) and finally the names of body parts. The addition of new words to the vocabulary coincides with the development and organisation of each semantic domain.

In addition to these "content words" (nouns, adjectives, verbs and adverbs), the lexicon must also include function words or "relational" terms (prepositions, articles, conjunctions, etc.), which play a vital role in the construction of syntax. The specificity of this type of vocabulary is that it is made up exclusively of words whose function is to indicate a relationship, particularly in terms of space or time, between two objects, persons or events. Their acquisition is slower and delayed in children with IDD because their comprehension requires more complex cognitive prerequisites (Facon, Magis, et al., 2012).

Vocabulary needs for person with low communication skills

The overall communication ability of the IDD person is an important factor for team (therapists, educators, etc.) to consider when selecting vocabulary to place in the AAC tool.

Persons with profound and severe IDD are unable to create their own lexicon. They must satisfy themselves with vocabulary selected by others.

Two kinds of vocabularies must be considered:

- The vocabulary needed to communicate – core vocabulary,
- The vocabulary needed to develop linguistic competencies – fringe vocabulary.

Core vocabulary

The core vocabulary is so called as it is fundamental to express the person's fundamental needs.

Core words are a small set of simple words that make up 80% of words used in everyday communication (see examples on <http://corevocabulary.weebly.com>).

The core vocabulary is limited to a set of highly useful words. Si it is made up of pronouns (I, you, etc.), verbs (eat, drink, sleep, etc.), descriptors (hot, cold, etc.) and prepositions (in, on, etc.). Core vocabulary contains very few nouns.

Core vocabulary is organized according to the context so that words are available when needed. Communication boards:

- contain the vocabulary used for meal, dressing, toilet, hobbies, etc.
- are placed where the activity takes place.

Fringe Vocabulary

The AAC tool may contain vocabulary that is still unknown or not used by the person. Indeed, this vocabulary is not selected because of its functional need in specific situation but because it can be useful for lexicon and language development.

Usually, it is considered that fringe vocabulary contains different categories of words that can be combined to form a more complex signification:

- nouns (e.g.: person, locations, objects),
- comparative (e.g.: less than, better, etc.),
- generic verbs (e.g.: to do, to give, to take, etc.),
- specific verbs (e.g.: to eat, to drink, to see, etc.),
- emotional words (e.g.: sad, happy, angry, etc.)



- words expressing an affirmation or a negation (e.g.: yes, no, not, etc.)
- words expression recurrence or cessation (e.g.: more, stop, etc.)
- proper names and pronouns referring to persons – proper names can also be used to mark a possession (e.g.: instead of my),
- isolated adjectives (e.g.: warm/hot, clean, etc.) and, in a second time, their opposite
- primary colors (white, black, yellow, blue, and red) which are the simplest one,
- basic prepositions.

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2.Materials Needed

The slides for this presentation (COM-IN_PR3_6_2_3_Vocabulary_EN.pptx)

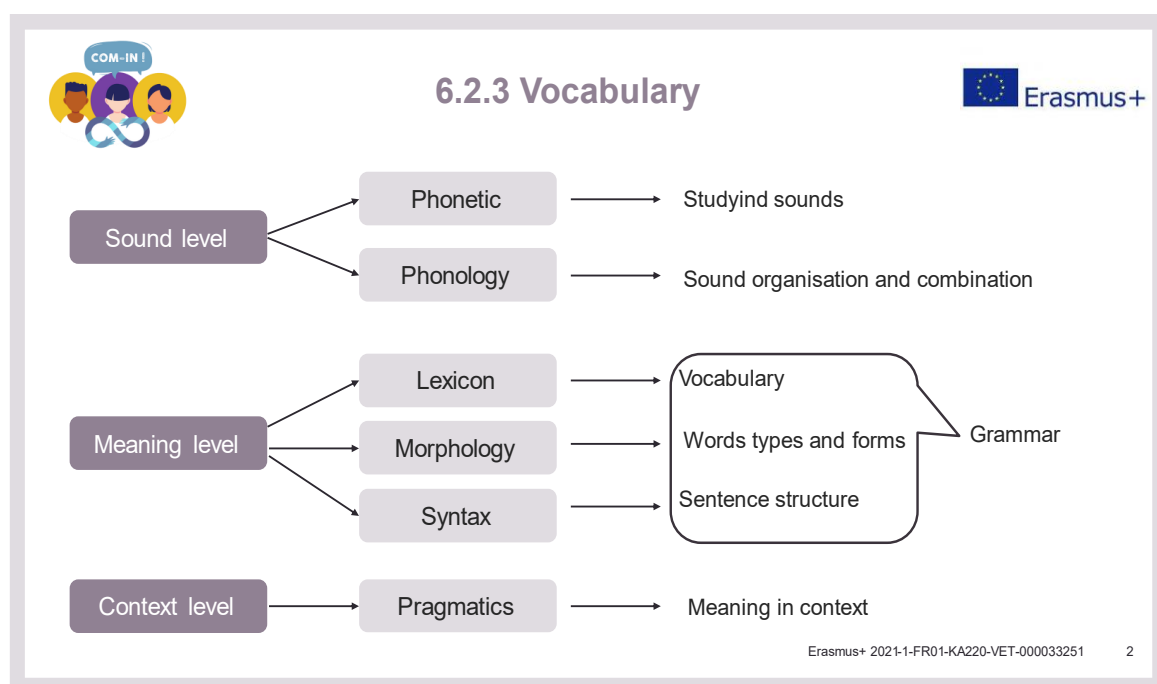
A Video projector



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3.Slides and Content

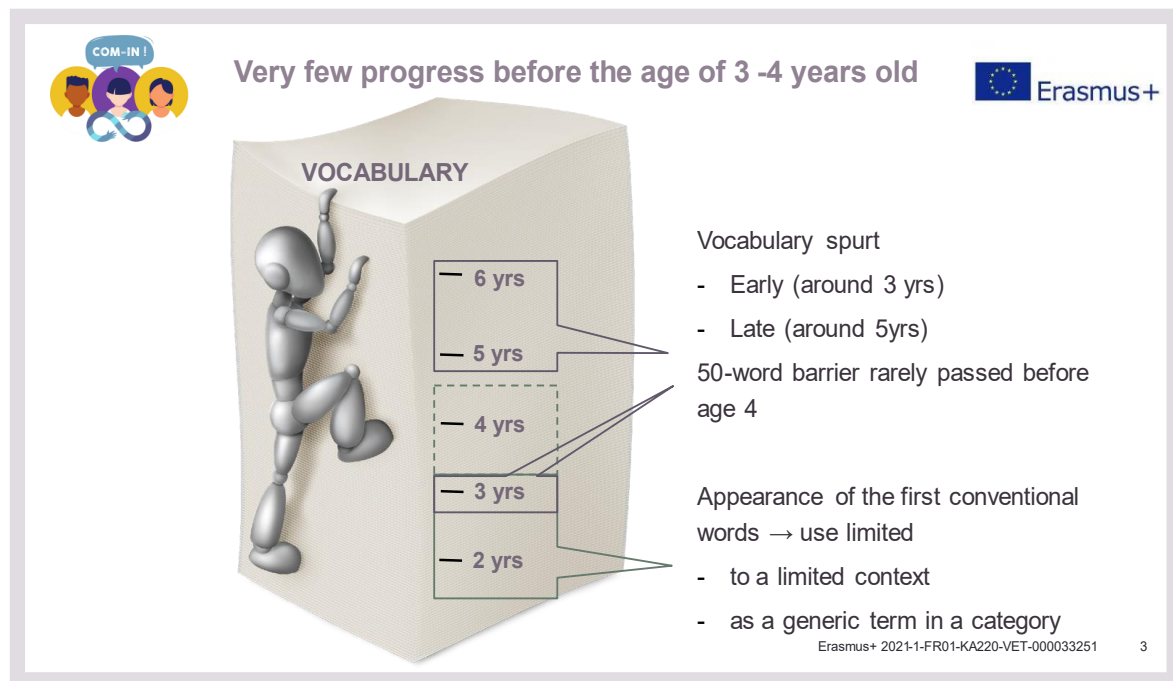
Slide n°2



Content:

Notes :

Slide n°3



Content:

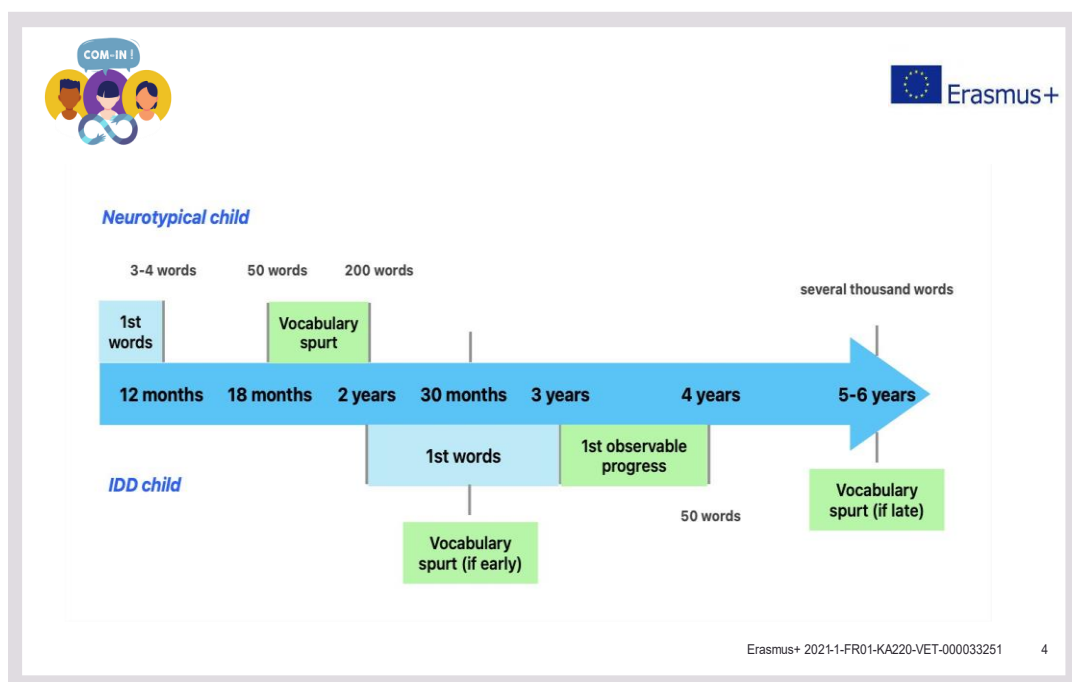
Although the first words appear in neurotypical children and IDD children at approximately the same mental age, it is only later that the delay widens in the latter, leading us to consider their lexical development as a slowed and incomplete version of normal development (Chapman, 2006). For example, it seems that only 10% of children with Down's syndrome produce their first word at the age of one, with the majority only starting to speak after the age of 2, against a background of great inter-individual variability (Berglund et al., 2001).



However, although delayed, the lexical development of children with Down's syndrome follows the same developmental trajectory as that of neurotypical children (Rondal & Comblain, 1999). In terms of vocabulary comprehension, a certain number of adolescents can even show performance equal to or better than that of normo-typical children of the same mental age (Chapman, 2006).

Notes :

Slide n°4



Content:

- The phenomenon of lexical explosion, which is a sign of vocabulary growth at around 18-24 months in normally developing children, is affected by intellectual disability and delayed in time. According to studies, it can be identified in children with Down's syndrome at




around 30 months or later, at around 5 to 6 years (Oliver & Buckley, 1994). Vocabulary growth is therefore less marked than in the average child, and in more than 50% of cases, children with a moderate intellectual disability do not break the 50-word vocabulary barrier before the age of 4 (Berglund et al., 2001). It is therefore only from the age of 3 to 4 that real progress can be observed. In the light of these data, it appears that the speed of acquisition of new words in IDD children is not equal to that of children in normal development. The developmental curves of the two groups gradually separate and the gap widens over the years, in a context of great inter-individual variability. As a corollary, their lexical stock remains lower than that of their peers in normal development matched based on mental age or linguistic age (Zampini & D’Odorico, 2011) .

As shown in the figure above, it appears that the speed of acquisition of new words in IDD children is not equal to that of children in normal development.


Notes :




Slide n°5




Vocabulary seems to be a strength in IDD



 Strength	Weakness
<ul style="list-style-type: none">• Lexicon• Semantic• Pragmatic	<ul style="list-style-type: none">• Phonology• (Morpho)syntax

Relative strength
Historically yes but ... Recent data are contradictory



A matter of word type
A matter of etiology

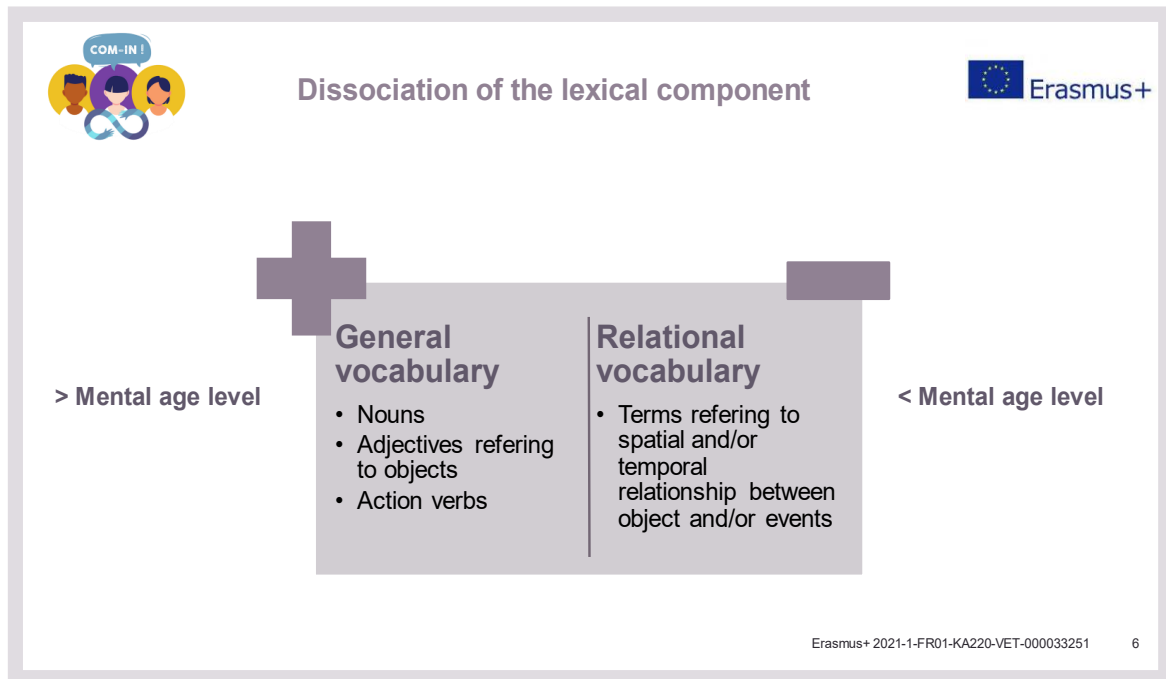
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Content:

Although the lexical component of language is generally considered to be a strength relative to other language domains in people with an intellectual disability, it is currently accepted that a dissociation must be made within this component between different categories of words (Zampini & D'Odorico, 2013; Facon et al., 2012).

Notes :

Slide n°6



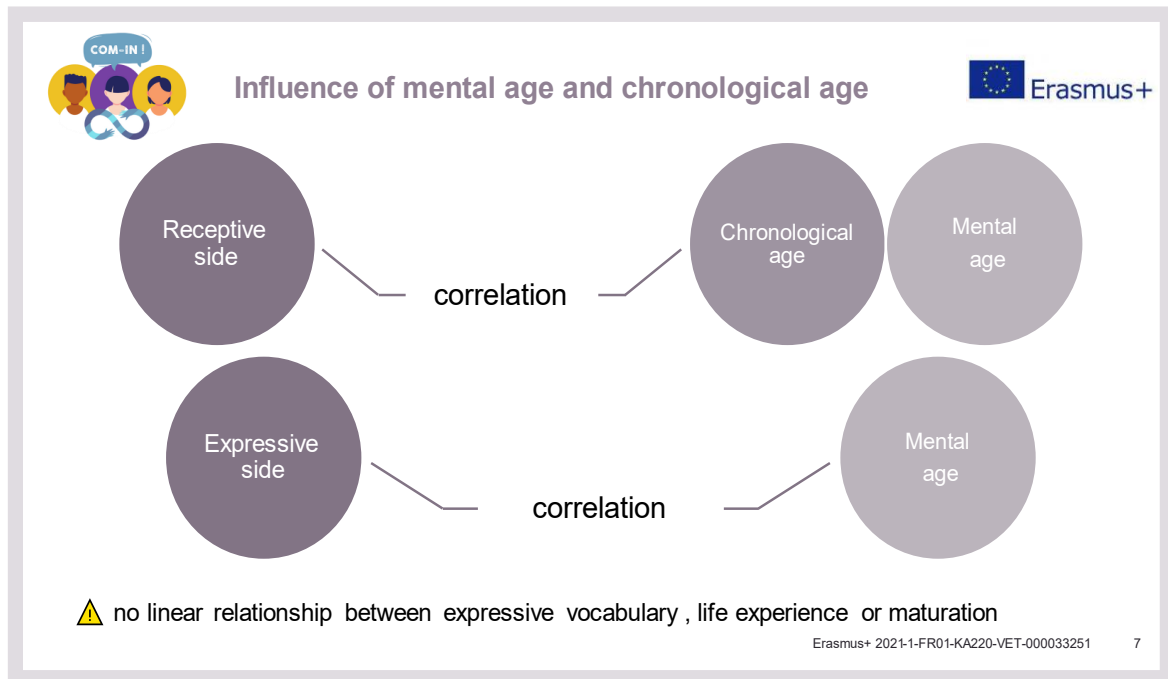
Content:

Indeed, while knowledge of general vocabulary (e.g. nouns, adjectives referring to objects, action verbs) is higher than expected on the basis of mental age, knowledge of relational vocabulary, i.e. terms referring to a spatial or temporal relationship between objects and events, is often lower than expected on the basis of the same mental age (Chapman, 2006; Miolo et al, 2005; Price et al., 2007; Facon et al., 2012; et al., 2016; Deckers et al., 2017; Hetzroni et al., 2019).

Notes :



Slide n°7



Content:

More than chronological age, mental age is an essential explanatory variable in the development of the lexical stock of people with an intellectual disability (Barrett & Diniz, 1989; Roberts et al., 2007). In fact, the various studies conducted over the last few decades have shown that there is no correlation between the size of the expressive vocabulary and the chronological age of IDD children, suggesting that there is no linear relationship between expressive vocabulary and life experience or simple biological maturation.


On the other hand, the size of receptive vocabulary is correlated with both mental age and chronological age, as shown by the work of Facon et al. (Facon et al., 2002; Facon, Nuchadee, et al., 2012; Facon et al., 2016). This




suggests that the life experience of people with an intellectual disability, whatever the aetiology, increases opportunities to expand the receptive side of the lexical stock, even if active retrieval from memory for production purposes remains deficient.

Notes :


Slide n°8



Developmental trajectory – Vocabulary content




The first 50 words produced ≈ to those of typical children



- ☐ Same referential content → daily routines, people and things (with over- or under extensions)
- ☐ Same grammatical categories → nouns, adjectives relatives to things and people

The first words understood ≈ to those of typical children



- ☐ Object names (at the same sensori-motor level than typical children)
- ☐ Between 12 ans 36 months → social words and object names
- ☐ Later → more complex lexicon requiring some cognitive prerequisites

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Content:

In the early stages of lexical acquisition, the words used by IDD children are relatively similar to those used by neurotypical children. For example, the first 50 words produced by children with Down's syndrome and neurotypical children have the same referential content, i.e. names of people



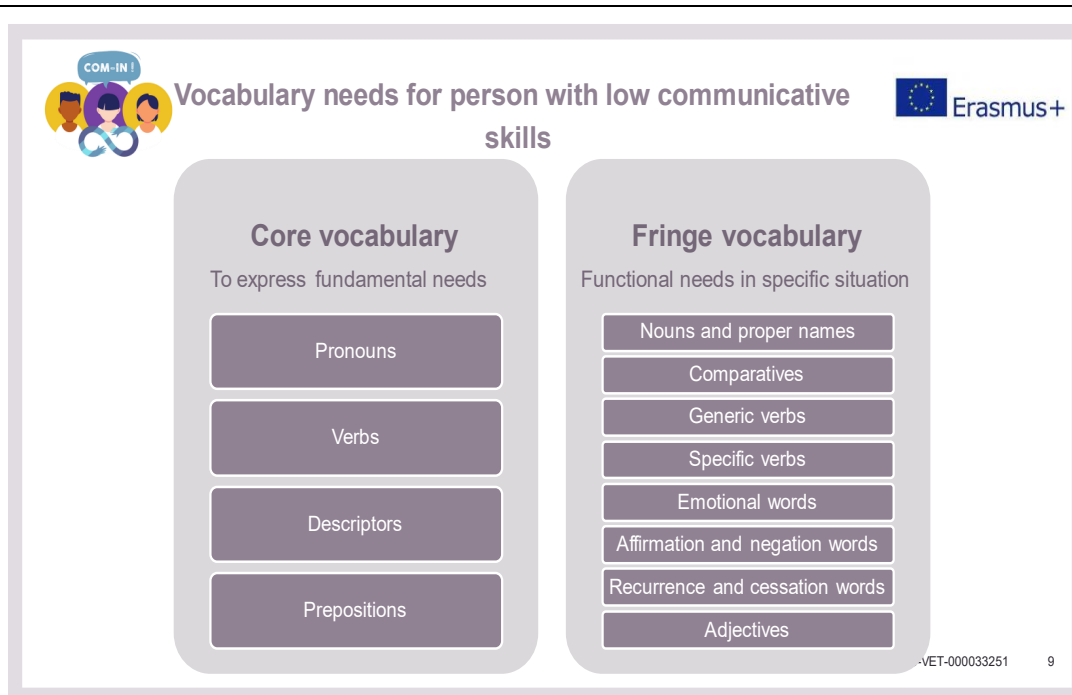
around them, animals, toys, kitchen utensils, food and drink, as well as words relating to daily routines and activities (Clark, 1995). Neurotypical and Down's syndrome children first acquire the names of objects that are "dynamically mobile or capable of movement" (people, animals, vehicles, etc.), then the names of objects that they can manipulate (toys, clothes) and finally the names of body parts. The addition of new words to the vocabulary coincides with the development and organisation of each semantic domain.

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Notes :

Slide n°9





Content:

Core vocabulary

- The core vocabulary is so called as it is fundamental to express the person's fundamental needs.
- Core words are a small set of simple words that make up 80% of words used in everyday communication (see examples on <http://corevocabulary.weebly.com>).
- The core vocabulary is limited to a set of highly useful words. Si it is made up of pronouns (I, you, etc.), verbs (eat, drink, sleep, etc.), descriptors (hot, cold, etc.) and prepositions (in, on, etc.). Core vocabulary contains very few nouns.
- Core vocabulary is organized according to the context so that words are available when needed. Communication boards:

- contain the vocabulary used for meals, dressing, toilet, hobbies, etc.
- are placed where the activity takes place.

Fringe vocabulary


- The AAC tool may contain vocabulary that is still unknown or not used by the person. Indeed, this vocabulary is not selected because of its functional need in specific situations but because it can be useful for lexicon and language development.
- Usually, it is considered that fringe vocabulary contains different categories of words that can be combined to form a more complex signification:
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 - specific verbs (e.g.: to eat, to drink, to see, etc.),
 - emotional words (e.g.: sad, happy, angry, etc.)
 - words expressing an affirmation or a negation (e.g.: yes, no, not, etc.)
 - words expression recurrence or cessation (e.g.: more, stop, etc.)
 - proper names and pronouns referring to persons – proper names can also be used to mark a possession (e.g.: instead of my),




- isolated adjectives (e.g.: warm/hot, clean, etc.) and, in a second time, their opposite
- primary colors (white, black, yellow, blue, and red) which are the simplest one,
- basic prepositions.

Notes :

Slide n°10



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Content:

Notes :

Slide n°11



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Content:

Notes :

Slide n°12





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Content:

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